

E. Response to Comments

Topic	Comment	Author	Response
Alternatives	I support Alternative B.	George Nelson Jr. (Nelson Tree Farm Inc.)	Thank you for your comment.
Alternatives	Favors Alternative B as outlined in the EA.	John Carroll (Columbia Helicopters Inc.)	Thank you for your comment.
Alternatives	The project received a thorough vetting when first introduced and, absent a singular technical issue, survived a legal challenge. The technical issue is resolved with additional public involvement. We field reviewed the project and reviewed the Environmental Assessment and see no reason why it should not go forward as structured as soon as possible.	Malcolm Dick, Jr. (American Forest Resource Council)	Thank you for your comment.

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Alternatives	<p>The EA does not offer a reasonable range of alternatives. The two action alternatives B and C resemble each other so closely that the involved public is essentially given a false choice. A more adequate range of alternatives would include, for example, an environmentally preferred alternative that explicitly avoids active management within all documented spotted owl activity centers and during nesting seasons for each listed avian species; avoids most road reconstruction and ground-based logging in Riparian Reserves and LSR (except where pre-existing road grades have been individually documented to exhibit chronic, adverse aquatic impacts, such as on FSR 3100010), and avoids thinning in alder stands/ neotropical bird habitat.</p>	<p>Kevin Geraghty (Olympic Forest Coalition, Board of Directors)</p>	<p>The alternatives considered in detail were developed to be responsive to the project's stated Purpose and Need. Alternatives that did not meet the Purpose and Need were not considered. The range of alternatives shown in the EA resulted from a rigorous interdisciplinary team process, and resulted in two action alternatives and two alternatives not considered in detail. The proposed action was developed to be responsive to resource concerns, a process which dropped from consideration about 21 forest stands which were originally considered for treatment. Additional stands were dropped from consideration because an alternative that included a bridge across Bear Creek was not considered in detail, which substantially decreased the potential range of alternatives. Additional modifications to the proposed action alternative were made to develop an additional alternative (Alternative C) based on remaining interdisciplinary team specialists concerns. The alternative presented in the comment as a possible additional alternative to expand the range actually lies between the No Action alternative and Alternative B, and is, therefore, still within the responsible official's discretion. While another option has been presented, the range of choices encompassed by the alternatives would not be further expanded by it.</p>

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Purpose and Need	The stated Purpose and Need is purely ecological and this is a good thing. But we caution you that many habitual practices on the Olympic National Forest are, in our view, not consistent with such a Purpose and Need. One such habit is a certain casualness in unit selection, and a reluctance to drop manifestly unsuitable units or portions thereof as more details emerge.	Kevin Geraghty (Olympic Forest Coalition, Board of Directors)	Unit selection is anything but casual. A rigorous interdisciplinary team (IDT) review of potential units is conducted using Geographic Information Systems (GIS) and other resource information, as well as field visits by IDT members. This information is used to develop the Proposed Action and in the development of alternatives. If new information becomes available once the NEPA analysis has been completed, modifications to units (such as dropping portions of units) can and often does occur in the decision making process and also occurs during the field layout of the timber sales which implement the project.
Purpose and Need	Commodity extraction and revenue generation is not mentioned as an objective and we therefore reasonably conclude that entering stands solely for reasons of revenue or commodity production is inconsistent with the Purpose and Need. Irrespective of this stated Purpose and Need, commodity extraction is not a licit motivation for thinning in either Late-Successional Reserves or Riparian Reserves under the NWFP.	Kevin Geraghty (Olympic Forest Coalition, Board of Directors)	The commenter is correct that entering stands solely for the reasons of revenue or commodity production is inconsistent with the project's Purpose and Need. The purpose of the project is to increase structural diversity of forest stands by developing a multi-layered canopy and other components of late-successional habitat. The project does include a secondary need to have a viable commercial timber sale as the only certain funding source to accomplish the implementation of the project is through the sale of wood products that would be removed as part of the treatment.
Silviculture	Contrary to what is stated in the EA in Chapter 3, page 52, about stand conditions, Forest Service stand exam data	Kevin Geraghty (Olympic Forest	Stand conditions are described as structurally uniform at the cited location in the EA, and the paragraphs in the EA following this statement describe the variability in other stand attributes mentioned by the commenter. The dominant tree species within any of the

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	<p>paints a more nuanced picture. Units are far from uniform in understory, species composition, pathogens, disturbance history, or site quality. Many units are dominated by species which clearly were not planted and approximately eight units are alder dominated. Unit 24 contains very little Douglas-fir and is dominated by species that were not planted in the 50's.</p>	<p>Coalition, Board of Directors)</p>	<p>current stands are the result of a variety of factors including (but not limited to) variability in the survival of planted trees, the quantity of natural regeneration, competitive interactions between individual trees and the tree species and individuals retained during past precommercial thinning treatments.</p>
<p>Silviculture</p>	<p>The EA states that portions of units that have older forest characteristics (such as units 39 and 51) would not be treated. Why not exclude portions of stands that have older forest characteristics from unit boundaries?</p>	<p>Kevin Geraghty (Olympic Forest Coalition, Board of Directors)</p>	<p>Small patches or groups of older trees were noted during Forest staff field reconnaissance, and these areas would be excluded from treatment. During field layout of timber sales designed to implement the project, unit boundaries would be adjusted to exclude such areas when they are adjacent to the boundary. Patches of older trees located in the interior of units would be designated as no-cut areas. Generally, these areas are sufficiently small in size that they are not readily displayed at the scale of the maps included in the EA.</p>
<p>Silviculture</p>	<p>The general stand description in the EA is wholly inaccurate for one entire unit, unit 65. Virtually the entire unit fits the description of older forest characteristics. We are not in any way reassured the portions of this unit with older forest characteristics would not be treated. We note as the</p>	<p>Kevin Geraghty (Olympic Forest Coalition, Board of Directors)</p>	<p>Unit 65 is an alder-dominated stand where the only planned treatment is the removal of red alder to release conifers and help accelerate the natural progression of the stand. The trees with older forest characteristics referred to in this comment would be excluded by the treatment prescription.</p>

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	<p>west end of the Bear Creek Saddle project would have been the first to be sold under the now withdrawn decision, unit 65 has been marked on the ground. Old forest portions of this stand are unambiguously within the marked unit and have not been excluded.</p>		
<p>Silviculture</p>	<p>A photo of a clump of trees in unit 65 shows some Douglas-fir with diameters of 52 and 38 inches. An increment core of one of the trees shows one of the trees to be at least 90 years old. What would DxD do here? With the red cedar exclusion, what would happen? What is this area doing in a thinning unit of a project which is suppose to be developing components of late-successional habitat? We recommend you drop this entire unit and all identifiable portions of other units which are older forest.</p>	<p>Kevin Geraghty (Olympic Forest Coalition, Board of Directors)</p>	<p>Of the photos submitted, several were recognized by Forest staff as specific locations outside of the proposed unit boundaries or within riparian no-cut buffers. However, unit 65 does contain some clumps of larger conifers, none of which would be removed by the proposed treatment. Unit 65 is an alder-dominated stand where the only planned treatment is the removal of red alder to release conifers. Any prescription applied here would not include conifers as a cut tree.</p>

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Silviculture	<p>The EA states that patches of pure alder will not be treated (page 4). A companion assertion is that alders would only be removed if they are within a set distance of live conifers that are 4 inches dbh and greater in size. Considering these assertions, units that are almost pure alder (such as units 29 or 43) are probably not commercially viable, and why then are they being retained in the project?</p>	Kevin Geraghty (Olympic Forest Coalition, Board of Directors)	<p>Patches of pure alder within these stands would not be thinned. Units 29 and 43 have sufficient numbers of understory conifers to warrant a conifer release treatment. The purpose of the project is to increase structural diversity of forest stands by developing a multi-layered canopy and other components of late-successional habitat. The project includes a need to have viable commercial timber sales in order to accomplish implementation; however every unit will not make an equal contribution to economic viability. Economic viability will change over time due to fluctuations in the timber market.</p>
Silviculture	<p>Our comments on the previous version of the Bear Creek Saddle project explained at length why we believe that mixed alder/conifer stands (in addition to pure alder) are very poor candidates for thinning interventions to increase structural diversity and other components of late-successional habitat. We have not changed our opinion. The evidence does not support thinning in alder-dominated or heavily alder-influenced stands for such purposes. Comments from the previous version include:</p>	Kevin Geraghty (Olympic Forest Coalition, Board of Directors)	<p>Within the project area, late-successional stands would be by definition conifer-dominated stands. The removal of some red alder to release conifers would help to accelerate the natural development of future conifer-dominated stands in the units selected for this treatment. Alders do shade conifers and reduce their growth since alder leaves are out during the growing season.</p> <p>Riparian conifer release projects on the Olympic National Forest that involve removing alder have been ongoing the last 10 years for fisheries habitat improvement. Research conducted in the field of riparian restoration has shown that conifer survival and growth can be enhanced by the removal of red alder competition. Underplanting could also be used in combination with the removal of red alder competition, but is not part of the proposed project. A summary of research in this area is contained in: Poulin, V.A., Bart Simmons, and Cathy Harris. 2000. Riparian Silviculture: An Annotated Bibliography for Practitioners of Riparian Restoration. B.C. Ministry of Forests. March 2000.</p>

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	<ul style="list-style-type: none"> • While a substantial body of literature exists which lends some support to the assertion that at least some features of old forests can be encouraged through some kinds of thinning interventions, no such body exists in the case of alder-dominated or mixed alder-conifer stands. • There is much literature which suggests collectively that thinning sixty-year old pure or mixed alder-conifer stands does not make any sense if one's objective is to create or encourage components of late-successional habitat. • Does it make ecological sense to remove alder which will be dead in a few decades, which is actively adding persistent soil fertility, 		<p>The Rainy Creek Biodiversity Project, a long term cooperative study between the Forest and Peninsula College would be continued with implementation of the Bear Creek Saddle project. This study is intended to evaluate the extent to which silvicultural manipulations of forest structure affect productivity and assess the relative impacts of different silvicultural treatments. The study includes alder dominated stands and would provide valuable monitoring data on the impacts of conifer release treatments.</p>

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	<p>which will provide snags and rotten wood when it dies, which supports lush, productive understories, and which to all appearances is not hindering the development of established understory conifers?</p> <ul style="list-style-type: none"> • Why thin a stand that is shortly and certainly going to thin itself, in complex ways, without human intervention, without robbing the stand of biomass and suffering the damage caused by yarding and road construction? • In cases where conifer seedling establishment is a perceived problem, one appropriate non-destructive intervention might be underplanting of shade-tolerant conifers. • Units 63, 65, 8, 9, 29, 30, and 43 fall into 		<p>The proposed action includes removing some red alder trees to increase the growth and vigor of the established understory conifers. All alder-dominated stands would retain many alder trees under the proposed prescriptions, since the conifer release treatment is designed only to increase the representation, size, and structure of minor species (mainly spruce and hemlock) in the stand. Ground vegetation would be disturbed, but not eliminated and would display a productive response to increased sunlight. Overall cover should remain about the same, since it is already high in alder areas. Sufficient red alder would remain in the stand to provide ecological benefits such as nitrogen inputs to the soil, future snags and coarse woody debris.</p> <p>Underplanting would be ineffective without thinning the alders and controlling competing vegetation (salmonberry) and animal damage (mountain beavers and ungulates), and is not proposed as a part of</p>

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	<p>alder-dominated and heavily alder-influenced stands. We do not see any ecological, as opposed to revenue generating, justification for thinning these stands.</p>		<p>this project.</p> <p>See discussion above and response to previous comment for the objectives related to these stands.</p>
<p>Silviculture</p>	<p>A close reading of the EA suggests to us that cottonwood and bigleaf maple are classified as “minor species” but there remains doubt, since the section in Chapter 2 which discusses prescriptions states only “cascara, willow, and other minor hardwoods” are to be retained. We are of course of the opinion that these species should not be cut if the objective of the project is as laid out in the Purpose and Need. We request that you clear up any lingering ambiguity on this subject of cutting bigleaf maple and black cottonwood.</p>	<p>Kevin Geraghty (Olympic Forest Coalition, Board of Directors)</p>	<p>Black cottonwood and bigleaf maple are minor hardwoods and would be retained.</p>

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Silviculture	<p>The Soleduck LSR Assessment indicates Sitka spruce will be retained in all stands, which does not correspond with the EA's statement that this particular species "would not be favored by designation specifications...". This seems an unfortunate and poorly explained change of heart on the part of the Forest Service. Please explain.</p>	<p>Kevin Geraghty (Olympic Forest Coalition, Board of Directors)</p>	<p>Sitka spruce would be retained in all stands in which it is found. It needs no particular favored treatment in the designation system because it is generally larger than its neighbors and would, therefore, be a "leave tree." No tree over 20 inches dbh would be cut in the Late Successional Reserve or Adaptive Management Area (except for within gaps or incidental danger trees), as noted on pages 19 and 35 of the EA.</p>
Silviculture	<p>It is not stated how the DxD marking algorithm would interact with species which are not to be cut, e.g. redcedar and minor hardwood species. Are trees of these untouchable species suppose to be invisible to the DxD algorithm? If a larger member of a cuttable species (larger than any other within the specified DxD cutting radius), e.g. Douglas-fir, is next to a redcedar, what happens? Does the Douglas-fir get cut?</p>	<p>Kevin Geraghty (Olympic Forest Coalition, Board of Directors)</p>	<p>Site-specific assessment of stand conditions would be used to determine how the application of a DxD spacing would interact with retained species. In some but not all cases, retained species would be treated as "ghost trees" (not used for spacing), and would be ignored during application of the DxD spacing. In other cases, such as where a conifer release treatment is the proposed prescription, the removal of red alder trees of larger diameter would increase the growth and vigor of adjacent smaller conifers.</p>

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Silviculture	<p>We believe strongly that DxD without significant additional hand marking or complexification cannot credibly be termed “variable density thinning” and is not an appropriate basis for a project whose sole stated purpose is to “increase structural complexity” and develop “components of late-successional habitat”. In particular it does not permit trees ever to remain in clumps as they are prone to do in natural forests. Please refer to a recently published paper by Derek Churchill and Andrew Larson, “Spatial patterns of overstory trees in late-successional conifer forests” (Can. J. For. Res. 38: 2814-2825 (2008)). DxD, and indeed all other sorts of crude “thinning from below” can also simplify canopies and eliminate preexisting midstories.</p>	<p>Kevin Geraghty (Olympic Forest Coalition, Board of Directors)</p>	<p>Use of a DxD spacing does result in higher variability in tree spacing and leave tree diameters than a strict thinning from below prescription. Additional spatial and structural variability across the project area would be added by one or more of the following methods in each stand prescription: riparian buffers, interior skips, treating some or all of retained tree species as “ghost trees”, utilizing diameter limits (upper and/or lower), and the resulting understory response to thinning over time. The trees retained in the stand by these methods would interact with the DxD spacing to produce some of the tree clusters referred to in the cited article by Larson and Churchill. On a site-specific basis the lower diameter limit would be adjusted, if necessary, to maintain midstory trees when they are a younger cohort with high crown ratios.</p>

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Silviculture	<p>The EA on page 19 states that “Leave trees would be selected irrespective of whether the tree has any damage, so that trees with defects, potential cavity or nesting trees and other similar features of structural diversity may be retained in the stands.” We think this is far from adequate as a prescription designed to “increase structural diversity and other components of late-successional habitat”. Far preferable would be to mark such trees, or to stipulate that they are invisible to the DxD algorithm. This would also promote the heterogeneity in residual density which we know unaided DxD does not and cannot produce.</p>	<p>Kevin Geraghty (Olympic Forest Coalition, Board of Directors)</p>	<p>Green damaged trees would not be targeted for removal under the prescriptions, but would be retained at a rate that is proportional to their occurrence in the stands. Project implementation and subsequent storm events would replace damaged trees removed by the thinning.</p>

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Silviculture	The EA statement on page 19 states there will not be an upper diameter limit on thinning in the AMA. This provision contradicts the project's Purpose and Need, which is to increase the structural diversity of forest stands by developing a multi-layer canopy and other components of late-successional habitat. If the primary intent within the AMA is instead to generate volume, then the Purpose and Need should be revised. Otherwise, thinning prescriptions within the AMA should not appreciably from those in the LSR.	Kevin Geraghty (Olympic Forest Coalition, Board of Directors)	The primary intent of thinning treatments in AMA is to add complexity to simplified second growth stands. A diameter limit is not automatically needed to achieve this, although it can help achieve spatial heterogeneity in some cases. In general there will not be an upper diameter limit on thinning in AMA, however based on individual stand conditions, an upper diameter limit may be specified in some cases (EA p. 19).
Aquatic	During the lawsuit which followed OFCO's appeal of the previous Bear Creek Saddle EA decision, a consulting hydrologist, Jon Rhodes, on behalf of OFCO presented detailed testimony on the likely aquatic effects of the previous project. None of the substantive criticisms leveled by Mr. Rhodes have been answered in the new version of the Bear Creek	Kevin Geraghty (Olympic Forest Coalition, Board of Directors)	<p>Mr. Rhodes comments were prepared and submitted to respond to the analysis contained in the original May 2006 EA. This EA (November 2008) contains additional information and analysis. Specific comments by Mr. Rhodes have been addressed as discussed later in this appendix.</p> <p>The project's no-cut buffers were determined on a case-by-case basis by the fisheries specialist (EA page 21, 146-149) to protect known sensitive areas. A recent study by Rashin et al, 2006, was directed at determining the effectiveness of BMP's (riparian no entry buffers) for protecting water quality from sedimentation related to timber harvest activities. The study indicated no-cut buffers at least 10 meters wide were effective in protecting water quality.</p>

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	<p>Saddle EA. It is still the case that the exiguous no-cut buffers are inadequate to protect streams from activity-generated sediment. There has been no quantitative analysis of the effects of reconstructing and constructing an acknowledged total of nearly four miles of roads within riparian reserves, nor is there any additional information or analysis on landings. No information is presented on landings for ground or cable-based yarding, and the impact of these could easily equal that of the proposed road activities.</p>		<p>The EA at page 85 includes a discussion of why an accurate quantitative analysis of sediment generated from the project would be difficult to determine because of the variables associated with project activities, and why even if an accurate quantitative analysis could be completed it would not relate directly to impacts on fish or water quality.</p> <p>The location and magnitude of helicopter landing activities are disclosed in the EA and its associated maps. Ground and cable-based logging system landing locations need to be negotiated with the timber sale purchaser, so they were not mapped. However there are numerous project design criteria and mitigation measures listed in the EA (pages 33-35) which address landings and landing rehabilitation. The impacts of landings are disclosed in Chapter 3 of the EA.</p>

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Aquatic	The EA's analysis of indicators affected by the project is not a surrogate for analysis of effects of Aquatic Conservation Strategy Objectives (ACSOs), but, nonetheless, indicates the project conflicts with the Aquatic Conservation Strategy (ACS) and several ACSOs.	Jonathan Rhodes, Consulting hydrologist	<p>The use of selected indicators from the NMFS methodology in the EA was for the purpose of framing the effects analysis of the project on the fisheries resource. Their use was not intended to be a surrogate for the effects of the project on the ACSOs. The NMFS methodology was developed for making determinations of effect for listed fish species. Because there are no listed in the project area, there is no requirement to follow the NMFS document or to analyze all the factors in their matrix of pathways and indicators. The use of the selected indicators was based on the fisheries biologist's professional opinion on how best to describe the project's effects.</p> <p>The effects of the project to the nine ACSOs are described in the EA on pages 125-133. The short-term adverse impacts are described and are expected to be well within the range that would occur as a result of natural events. The long-term benefits of the project, multiple resource benefits and aiding in restoring ecological process within the watershed, are also described. Overall the project would maintain or restore each of the ACSOs.</p>

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Aquatic	The degradation of road density and drainage by the project indicates that the project's impacts conflict with several ACSOs and a NFP requirement for Key Watersheds.	Jonathan Rhodes, Consulting hydrologist	<p>The ACS consistency analysis in the EA (pages 125-133) discloses that the project would maintain or restore each of the ACSOs. Additionally the EA discloses (pages 103-104) that of the subwatersheds that currently exceed the 2.5 miles per square mile indicator described in the Sol Duc Pilot Watershed Analysis, only the Deep Creek subwatershed has temporary road construction and this is minor (0.1 mile) and would not significantly change road densities.</p> <p>The NFP requirement for Key Watersheds to have no net increase in roads would be met by this project. The no net increase in roads is gauged from a 1994 baseline and since that time there has been extensive road decommissioning (about 32.3 miles of system roads) to reduce road miles in the Sol Duc watershed.</p>
Aquatic	The EA did not disclose the dimensions and locations of Riparian Reserves within the project area.	Jonathan Rhodes, Consulting hydrologist	While this was a true statement relative to the September 2006 version of the EA, it is not true of the November 2008 version. One of the EA maps shows the locations of Riparian Reserves within the project area. And as mentioned on page 21 of the EA, the supporting watershed analyses for this project (Sol Duc Pilot and Deep Creek and East and West Twin Rivers) indicate the Riparian Reserve dimensions, which are based on site potential tree heights.

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Aquatic	The EA fails to disclose the amount and location of project activities within Riparian Reserves and at stream crossings.	Jonathan Rhodes, Consulting hydrologist	While this was a true statement relative to the September 2006 version of the EA, it is not true of the November 2008 version. The EA at pages 15-18, 22, and 26-29 describes treatment unit acreages and road work within Riparian Reserves. The alternative maps also indicate proposed road use relative to Riparian Reserves.
Aquatic	The EA fails to adequately disclose that project's road activities, especially those in Riparian Reserves, will trigger impacts on sediment delivery in conflict with several ACSOs.	Jonathan Rhodes, Consulting hydrologist	The soils and fisheries environmental consequences discussion in Chapter 3 of the EA disclose the project's road activities impacts on sediment delivery (specifically EA pages 92-95, 102). As discussed in the ACS consistency section of the EA (pages 125-133) the project would maintain or restore all the ACSOs.
Aquatic	The EA's claim that some road reconstruction and re-opening will have net benefits has no sound basis and is very likely incorrect.	Jonathan Rhodes, Consulting hydrologist	The fisheries environmental consequences discussion in Chapter 3 of the EA discloses the project's road activities impacts and benefits (specifically EA pages 90-104). As discussed in the ACS consistency section of the EA (pages 125-133) the project would maintain or restore all the ACSOs. Benefits of road reconstruction are specifically discussed for ACSOs 2, 3, 5, and 9. The EA at page 115 also discusses the benefits to invasive species treatment associated with road reconstruction.

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Aquatic	The EA fails to disclose the location and magnitude of landing activities and explicitly analyze their impacts on ACSOs.	Jonathan Rhodes, Consulting hydrologist	See previous comment response.
Aquatic	The EA fails to reasonably disclose that project activities in Riparian Reserves conflict with ACSOs by degrading the reserves, the project's no-cut buffers will not eliminate these impacts.	Jonathan Rhodes, Consulting hydrologist	The EA at pages 125-133 discloses how the project would maintain or restore all of the ACSOs. See previous comment response related to effectiveness of no-cut buffers.
Aquatic	The analyses of effects on ACSOs in the EA and "Dear Interested Party" letter are not adequate because they fail to reasonably incorporate the persistent cumulative impacts of the project.	Jonathan Rhodes, Consulting hydrologist	The cumulative effects to soils and aquatic resources of the project are discussed in the EA at pages 94-96, 100-101, 104, and 106. Where appropriate these effects were incorporated into the EA discussion of ACS consistency (EA pages 125-133).
Aquatic	The EA fails to adequately disclose the project's direct, indirect, and cumulative impacts on soils, watersheds, water quality, stream channels, and fish populations and their habitats.	Jonathan Rhodes, Consulting hydrologist	The project's impacts to the listed resources are discussed at length in Chapter 3 of the EA.

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Aquatic	<p>Statements in the EA concerning designed gaps (EA page 20) and location of helicopter landings (EA page 34) seem to suggest that the placement of landings within Riparian Reserves has some sort of restoration or complexity benefit. But it does not. The ACS directs the Forest Service generally to “minimize road and landings locations in Riparian Reserves”. Putting “most” helicopter landings within Riparian Reserves does not seem like a great way to adhere to this guideline.</p>	Kevin Geraghty (Olympic Forest Coalition, Board of Directors)	<p>There is no language in the EA which suggests that placing helicopter landings within Riparian Reserves will specifically provide a restoration benefit. Landings are a necessary part of this overall project. Landing location was given careful consideration during project development. Operational constraints, such as existing road locations, topography, and powerline locations, made it necessary to locate a number of proposed helicopter landings within Riparian Reserves.</p> <p>Project design features and mitigation measures will minimize potential impacts of helicopter landings within Riparian Reserves (EA pages 33-35). Impacts of landings on soil compaction are discussed in the EA on page 92. Impacts of helicopter landings on the function of Riparian Reserves are discussed on pages 102 -103. The potential impact of helicopter landings in Riparian Reserves in context of the whole project is discussed in the ACS consistency section of the EA (pages 125-133).</p> <p>The project will maintain or restore all the ACSOs (EA (pages 125-133)). The project also meets all Riparian Reserve standards and guidelines, including RF-2 which requires the Forest Service to minimize road and landing locations in Riparian Reserves (NWFP ROD C-32).</p>
Aquatic	<p>About 20% of Riparian Reserve acreage will not be entered because it is within a designated no-cut buffer. The remaining 80% will be treated identical to the surrounding non-Riparian Reserve allocations, which amounts to an effective 80% shrinkage of</p>	Kevin Geraghty (Olympic Forest Coalition, Board of Directors)	<p>The riparian no-cut buffers were not developed as a replacement for Riparian Reserves. A description of these buffers and how they were developed and for what purpose are explained in the EA at pages 21-22, and 146-149. The Riparian Reserve Forest Plan allocation is described in the EA at pages 8 and 21, and the Bear Creek Saddle project in no way proposes shrinkage of this allocation. Project design criteria and management requirements (EA pages 30 – 37) will ensure compliance with Riparian Reserves standards and guidelines.</p>

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	<p>Riparian Reserves. Such a shrinkage would imply that Riparian Reserve on fish-bearing streams are well less than a site potential tree height, and Riparian Reserve on non-fish bearing streams are well less than half a site-potential tree height. Wood is being removed from well within treefall and litterfall radius of most streams in the project area. We point out that relatively small diameter wood has acknowledged functions in relatively small velocity and small volume streams, and that downed wood acts to store sediment and regulate sediment delivery. We would expect that, at a minimum, the removal percentages and balance of yarding methods within this 80% of “entered” Riparian Reserve should be different from the standards on surrounding areas with less direct aquatic influence.</p>		<p>Stand conditions described in the EA at pages 52-53 generally pertain to Riparian Reserves as much as they do to the remaining portions of stands within LSR and AMA. As such, the treatments proposed within Riparian Reserves are expected to improve the complexity and diversity of these stands and will be a benefit to the Riparian Reserves. This project follows Riparian Reserve management direction (EA page 9) and meets all Riparian Reserve standards and guidelines, including TM-1 which requires the Forest Service to apply silvicultural practices to Riparian Reserves to control stocking, reestablish and manage stands, and acquire desired vegetation characteristics needed to attain Aquatic Conservation Strategy Objectives (NWFP ROD C-32). The project will maintain or restore all the ACSOs and contribute to a restorative effect on ACSOs 1 and 8 (EA (pages 125-133).</p> <p>The no cut buffers included on all streams would retain the existing stem densities and provide a source of smaller size trees as referred to in the paper cited by the commenter. The fisheries biologist considered the benefits to be accrued by thinning versus not thinning. The distribution of no cut and treatment areas near the streams provides a mix of small diameter and future larger diameter trees. Based on professional opinion the fish biologist determined that there would be a more than adequate supply of small and larger diameter trees providing LWD recruitment and leaf litter within each of the 3 watersheds, given the miles of stream adjacent riparian areas that are not being treated (outside planning area units). The paper by Beechie et al, 2000, did not address modeling diameter function in small or large streams where no cut buffers were implemented.</p>
Wildlife	We find it rather shocking to see prohibitions on cutting large trees (over 21”) with	Kevin Geraghty (Olympic	Trees with potential nesting structures have not been identified within the AMA stands proposed for treatment. To meet the stand density objectives in locations where the majority of trees are larger

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	<p>potential nesting structures during northern spotted owl and marbled murrelet breeding seasons (EA page 37). This of course implies that it is permissible to cut such trees outside of the breeding season, presumably in AMA since the EA states that no trees over 21” dbh will be cut in LSR. Here we detect a clear intent not to protect them. How is the felling and removal of large trees with potential nest structures in any way consistent with the stated Purpose and Need for this project? We strongly recommend that the dbh diameter limits which you propose to impose on LSR logging in this project also apply to AMA. We note in passing that in past programmatic BiOPs, trees over 21 “ dbh have generally been excluded from such programmatic permissions.</p>	<p>Forest Coalition, Board of Directors)</p>	<p>than 21”DBH, removal of the smaller trees by the thinning treatment may result in cutting some trees greater than 21” DBH, however these trees are not considered potential nest trees due to the absence of adequate structure (platforms, large branches, adjacent cover, etc). In this case if trees larger than 21” DBH would be cut, then adjacent larger trees would remain as leave trees. Trees larger than 21” DBH may also be removed in gaps to meet the objectives for this component of the variable density thinning treatment, but again, these trees are not considered potential nest trees. Danger trees along roads or landings that are greater than 21” DBH will be reviewed as potential nest trees by the wildlife biologist; removal of such trees, should they meet the criteria, are allowed under the current programmatic.</p>
<p>Sensitive Species</p>	<p>The EA points out (page 75) that certain Survey and Manage “sensitive “ species do not require surveys because stand ages are less</p>	<p>Kevin Geraghty (Olympic Forest Coalition,</p>	<p>Per the silviculturalist’s report, this stand is approximately 50–60 years old. Scattered trees may be older, however the entire stand is of an age that would not require surveys for Survey and Manage species.</p>

Topic	Comment	Author	Response
	than 80. We contend that that assertion is likely incorrect in the case of unit 65, and thus commercial entry would require such a survey.	Board of Directors)	
Roads	We commend the EA's commitment to limit skyline corridor width to 12 feet, and to minimize clearing widths on temporary roads "to what is necessary for safe haul". We suggest that the clearing width limits also be applied to other non-open roads, either "ghost" roads or level 1 roads, since many of these are heavily vegetated and some in fact are not easily distinguishable from their surroundings.	Kevin Geraghty (Olympic Forest Coalition, Board of Directors)	<p>Thank you for your comment. The unclassified, abandoned roads used for the project will be treated as temporary roads in terms of construction and decommissioning requirements. As such the project design criteria concerning temporary road construction on page 33 of the EA apply to unclassified, abandoned roads. This criteria is "Minimize clearing widths to what is necessary for safe haul (generally widths of 16 feet on level ground, 20 feet for curves, and slightly more for steeper grades)".</p> <p>Level 1 roads generally have a more defined road profile than unclassified, abandoned roads so the clearing width limits for these roads will in some cases be set by the existing conditions. However the goal on these roads, as with temporary roads, is to minimize clearing widths to what is necessary for safe haul.</p>
Slash Burning	We also commend generally the intent to leave non-merchantable material in units and scatter landing residues, or place the material on temp roads, rather than piling and burning. We do not like slash burning in wet forests. It volatilizes organic matter and nutrients which would be better left on site.	Kevin Geraghty (Olympic Forest Coalition, Board of Directors)	Thank you for your comment.